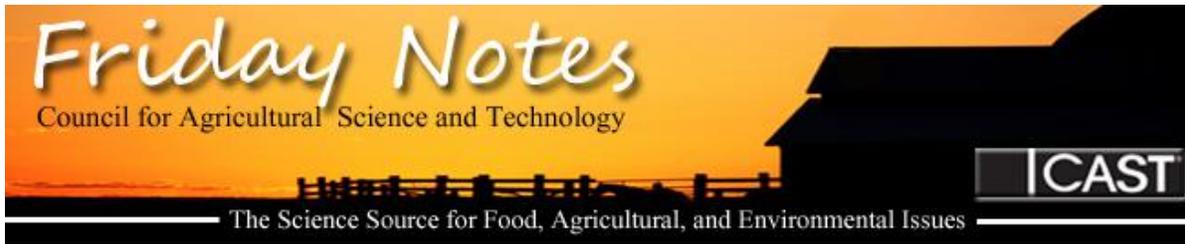


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Friday Notes is designed to enhance communication among various agricultural sectors, educators, students, and the public who are interested in a variety of plant, animal, food, and environmental issues. *Friday Notes* advocates the pursuit of credible, unbiased, science-based information. Material contained in linked articles is from the original authors and does not necessarily reflect the views of CAST.

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Zip-a-dee-do-dah



Fly along the [world's longest zip line](#)--opened on the UAE's highest mountain, Jebel Jais.

Soil Health Gathering

Soil health will take center stage at an upcoming [Kansas State Research and Extension meeting](#) on Feb. 28 near Oswego, Kansas.

Ag Day Essay Winners

In case you missed the announcement, check here for the 2018 Ag Day [essay contest winners](#).

Send 'Em In

[Click here to submit an idea](#) for a CAST publication.

Food Evolution



The acclaimed documentary about biotech foods will be [screened at the](#)

February 23, 2018

Biotech Revolution

Regulations, applications, acceptance

The genie is out of the bottle regarding gene editing and other biotech innovations, and according to most scientists, this is a good thing--for medicine, agriculture, and other pursuits. Safe, efficient applications are the goal, but in the world of agriculture, outdated regulations could hinder advancements. In [this editorial, ag experts Alison Van Eenennaam and Nina Federoff explain the best path forward](#): "Precise gene-editing approaches are poised to revolutionize agriculture, but we have to start regulating from common sense instead of fear."



Note: In late March, [CAST will roll out its new issue paper, Regulatory Barriers to the Development of Innovative Agricultural Biotechnology by Small Businesses and Universities](#).

Check these stories for related ag/tech information:

***Agri-Pulse's* Sara Wyant looks at [agricultural technology and the crucial funding needs for research](#)--with insights from Sonny Ramaswamy and others.

**According to Sam Fiorelli of the Danforth Plant Science Center in St. Louis, the development of technology in agriculture has helped [encourage young people to stay in or come back](#) to rural communities.

Check the General Section below for info about medical innovation.

News and Views

Ag and Economics: This writer says the [Tax Cuts and Jobs Act](#) is basically positive for most farmers, while this article says the administration's [budget could cut ag programs](#) in a big way.

Youth in Agriculture (Podcast): This young agriculturalist discusses her past and future and why it's up to millennials--like herself--to [be the](#)

[UC-Davis campus](#) on March 7, followed by a Q&A session.

Teach Ag and the FFA

The National Teach Ag Campaign seeks outstanding agricultural education majors to represent the profession as [National Teach Ag Ambassadors](#) at the 2018 National FFA Convention & Expo in October.

International Beef

Applications for the inaugural Texas A&M University [International Beef Academy](#) are being accepted.

Feeding Minds Press

A new children's book publishing venture from the American Farm Bureau Federation is working to bring [children accurate knowledge about agriculture](#).



CAST Social Media

Click [here for links to CAST sites](#):

Twitter, Facebook, LinkedIn, Pinterest, videos, and blogs.

["voice" for agriculture now, not just in the future.](#)

Blockchain Updates: Grocers and the food industry seem [interested in blockchain technology](#) if it can empower solutions such as traceability, food safety, and chain of custody--and another article looks at [how blockchain tech will change the way we eat](#).

The Importance of Land-grant Colleges: This acclaimed writer takes a personal look at the value of [government-supported, land-grant colleges](#) established by the Morrill Act.

News from the Far Side of the Barn

A Foul Fowl Situation

(video): Many KFC restaurants in the United Kingdom were temporarily closed amid a [chicken shortage due to delivery challenges](#).

Don't Mess with a Mongoose

(videos): A [mad mongoose stands up to](#) a group of lions. And in another clip, we see the quick reflexes a [mongoose has as it goes up against a cobra](#).

Goat 1, Bull 0 (video): Actually, you might [not want to mess with a goat either](#).



Why did the chickens NOT cross the road? See story at left.

Planting Season Approaches

Robert Louis Stevenson supposedly said, "Don't judge each day by the harvest you reap but by the seeds that you plant." Figuratively, this speaks about philosophy; literally, this speaks to the farmers of the Northern Hemisphere who see planting season looming on the calendar. With preparations in mind, we offer the following links and research papers about many aspects of crop production.

CAST's recent issue paper, [Plant Breeding and Genetics](#), focuses on the critical importance of innovation in plant breeding to meet the challenge of providing food and nutritional security to humankind.

Researchers used 6,000 peer-reviewed studies to [compare GMO corn with conventional varieties](#)--and they found that GMO corn increased yields and decreased dangerous food contaminants.





These researchers looked at whether or not vegetation from [crop production has influenced the Midwest climate](#). The report includes a video and input from Rick Cruse of Iowa State University.

Another recent CAST Issue Paper--[Crop Protection Contributions toward Agricultural Productivity](#)--examined the current plant protection revolution that is driven by the biological realities of pesticide resistance, various market forces, and real or perceived side effects of pesticides.

In the [latest dicamba update](#), an Arkansas judge dismissed a challenge of the state's ban on the controversial weed killer.

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 zip line pic from cnn.com, science graphic from blogs.nature.com, and chicken cartoon from ichef.bbci.co.uk. P. 2 tractor pic from spraying.jpg. Animal Sec bridge pic from summitdaily.com. Food Sec. fish pic from eater.com. Plant Sec. Fairchild photo from npr.org. Inter. Sec. Mr. Potatohead graphic from thecoli.jpg. Gen. Sec. grocery photo from wqad.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Sheep-human Hybrids (videos): Building on a controversial breakthrough made in 2017, scientists say they have created [the second successful human-animal hybrids](#)--they hope this advances organ transplants.

Eggs and Consumers: A proposed bill in Iowa would require grocery stores that sell eggs and participate in federal food programs to [sell conventional eggs as well as specialty eggs](#). As this opinion response shows, [not all agree](#).

Not Ready for Prime Time--Yet (video): Scientists are [developing meat in laboratories](#)--but they face issues of cost, taste, and "ick."

Artificial Intelligence and Hog Production: A gigantic Chinese company is [using facial and voice recognition on large pig farms](#). And in another link, a BBC story adds more information about [this hog production system](#).

Meat-lovers' Technique: A Kansas State University graduate student's study says that [marbling can help maintain the juiciness](#) in meat cooked at high temperatures.

Working with #TeamFiona at the Zoo (video): Not many can say they've [found their dream job at such a young age](#), but this Ohio State University graduate may be the exception.

How High Is the Moo? DNA extracted from a 6,500-year-old ox bone has helped an international team of scientists [identify the genes that determine the height of cows](#).



Avoiding Road Kill: Colorado--and other states and countries--have found that [wildlife crossings are reducing animal-related car crashes](#).



Food Science and Safety News

Dangerous Dish (video): This [Japanese fish delicacy is so dangerous](#) that chefs must undergo years of training to learn how to prepare it. This and other food items are featured in this video--catch the frenetic mochi pounding at the end.

Baconmania Goes Global: The recent [Blue Ribbon Bacon Festival](#) had an international flair.

Food Poisoning Detection App: These scientists are developing a smartphone app that uses a \$30 microscope attachment to [quickly and efficiently detect harmful bacteria](#) in food.

Food Waste Decisions: Jayson Lusk ([2017 BCCA winner](#)) and Brenna Ellison published a [paper about consumers and food waste decisions](#).

Good News in School Cafeterias: This study found that food safety standards for ground beef supplied to the National School Lunch Program are highly [effective in keeping out harmful bacteria](#).

Packaging Innovation: Golden times lie ahead for the food and beverage packaging industry as [consumers show an increased need for convenience](#).

Biotech Success: The GMO Answers site points out that--when it comes to biotech food--billions of pounds have been eaten, thousands of studies have been conducted, and [no illnesses have been recorded](#).



It may be considered a delicacy, but is the risk worth the reward? See related article at left.



Plant Agriculture and Environmental News



19th Century Foodie: Botanist David Fairchild traveled, gathered plants, and worked for the

Artificial Intelligence in the Field (video): This tech group thinks [artificial intelligence could identify trouble](#), such as fungus growth and water shortages, in corn and soybean crops weeks before the naked eye would ever realize it.

USDA. [His seeds and plants from six continents greatly affected U.S. crop variety and food menus.](#)

Bin Busters (video): This University of Kentucky professor [explains alternative storage options](#), as the state's farmers broke yield records for both corn and soybeans.

Organic Farming Research: A bipartisan pair of U.S. senators is introducing legislation designed to [improve organic farming research](#).

Biofuels and Opinions: [Ethanol supporters take issue](#) with Senator Cruz, and the U.S. Commerce Dept. says Argentina and Indonesia are [dumping biodiesel in the U.S. market](#) below fair value.

USDA Predictions: The USDA's 10-year projections for food and agriculture include [continued growth for U.S. corn and soybean demand](#). The organization also made some predictions about ethanol production.

Whitewash or Hogwash? (opinion): This reviewer says the book *Whitewash* attacks glyphosate use, but it is actually designed to [sow doubt about science and mislead the public](#) about the chemical's relative safety.

Plant Sedative: This experiment focuses on observing plant intelligence and shows that [humans might be more like plants](#) than we originally thought.



International News

Perfect Purification (video): This team of Australian scientists has [developed a technology used to purify water](#)--making it safe to drink in one simple step.

Lunch for 1.4 Billion: China is grappling with a daunting conundrum--how to [feed nearly one-fifth of the world's population](#) with less than one-tenth of its farmland, while adapting to changing tastes.

Farming Fun on African TV: This African reality TV show demonstrates to young people that [farming can be fun and profitable](#).

In a Sunburnt Country: The state of South Australia is launching a program to [install solar panels on homes and distribute Tesla batteries](#) to create the world's largest "virtual power plant."

Ag Up in the Air: The African Union is [requesting increased use of drones for agricultural](#) purposes.

Dealing with Hunger and Poverty: The UN is launching an ambitious [program to fund loans and grants](#) to help millions in developing countries strengthen their food security and livelihoods.



A Dutch [potato farmer uses innovation and technology](#) to run one of the world's most advanced potato farms.



General Interest News

CRISPR, Cancer, and Funding: This article looks at gene-editing medical advances in China and opinions about ["uneven playing fields regarding rules."](#)

From DNA to Disease Diagnosis: Genetic [diseases can be identified more quickly](#)--even before someone is exhibiting the associated trait.

Supplements: Pills, powders, drinks, and bars--more than 90,000 vitamin and dietary supplement products are sold in the United States. [Are they necessary? Are they safe?](#)

Winter Foraging: Forage for edibles when it's cold outside? Here is [a guide on how to spot these winter herbs](#)--and suggestions about what you can do with them.

Drought Worries: Drought conditions are [affecting several states](#)--especially Oklahoma, Texas, Arizona, and Kansas. This site considers actions that need to be taken and some resources that are available.

Big Horned Sheep in the Plains: The Omaha Zoo and Nebraska officials captured and released 51 bighorn sheep in western Nebraska in a [continued effort to track and aid populations in the area](#).

Chocolate Chain: Ever wonder how the chocolate we know and love gets from the tree to our hands? From cocoa tree to chocolate--[click here for the step-by-step process](#).



National Grocery Bagging Championships: It's not the Olympics, but hey, [the winner gets \\$10,000](#).

CAST Information

Check out CAST's page at the [YouTube site](#) to view highly regarded ag-science videos about probiotics, food safety, and water issues--or the latest video dealing with proposed mandatory labeling of GMO food items.



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- * American Farm Bureau Federation
- * American Meat Science Association
- * American Meteorological Society, Committee on Agricultural and Forest Meteorology
- * American Seed Trade Association
- * American Society for Nutrition Nutritional Sciences Council
- * American Society of Agricultural and Biological Engineers
- * American Society of Agronomy
- * American Society of Animal Science



- * American Society of Plant Biologists
- * American Veterinary Medical Association
- * Aquatic Plant Management Society
- * BASF Corporation
- * Croplife America
- * Crop Science Society of America
- * DuPont
- * Elanco Animal Health
- * Entomological Society of America
- * Innovation Center for U.S. Dairy
- * Land O'Lakes
- * Monsanto

- * National Corn Growers Association/Iowa Corn Promotion Board
- * National Milk Producers Federation
- * National Pork Board
- * North Carolina Biotechnology Center
- * North Central Weed Science Society
- * Northeastern Weed Science Society
- * Poultry Science Association
- * Society for In Vitro Biology
- * Soil Science Society of America
- * Syngenta Crop Protection
- * The Fertilizer Institute
- * Tyson Foods
- * United Soybean Board
- * Weed Science Society of America
- * Western Society of Weed Science

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